What is claimed is:

1 SUB A priority control method using a single output queue wherein
2 an output priority of a packet not undergoing convergence is improved
3 by exchanging the order of a packet undergoing convergence or a packet
4 which may undergo convergence with the order of a packet not undergoing
5 convergence.

1 2. A priority control method according to claim 1 wherein by setting
2 an operation range for exchanging the order of said packet in a
3 predetermined range, a priority of a packet whose priority is reduced
4 because said packet undergoes convergence is prevented from being reduced
5 too much.

1 3. A priority control method using a packet exchange unit having
2 a single output queue wherein an output portion of the packet exchange
3 unit includes a single output queue having first and second output paths
4 for storing a packet input from an input path in order and outputting
5 the stored packet in order; a queue control means for unless the first
6 and second convergence notice signals are input, outputting a packet
7 input to said queue to said first and second output paths in the input
8 order; and a back/forth packet comparison and exchange means for
9 controlling so as to, if a first or second convergence notice signal
10 is input, output a queue exchange instruction to individual packets
11 scheduled to be output to said first or second output path, existing
12 in a predetermined range of said output queue, thereby exchanging the
13 order of output of packets not undergoing convergence control and
14 outputting the packet not undergoing convergence control with priority,
15 thereby improving availability of the output path.

4. A priority control method according to claim 3 wherein the predetermined range including said output signal queue is set to a range controllable by said back/forth packet comparison and exchange means and not too wide.

5. A priority control method according to claim 3 wherein the exchange of output queue of a packet not undergoing convergence control by said queue exchange instruction comprises: a first step of detecting an exit path in which a convergence notice signal is input; a second step of searching a portion including arranged packets of an exit path in which the convergence notice signal is not input, in said predetermined range and just after a packet to be sent to said exit path; a third step of exchanging both the packets in said portion; and a fourth step of, if a convergence notice signal is not input in a head packet after that, reading the packet normally and outputting said packet to the first or second output path.

6. A priority control method according to claim 5 wherein said order exchange of the packet is carried out within a packet sending time interval.

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